

WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a first conductive type of first MOS transistor
which is formed in a first active area and in which
5 a gate is configured from a first gate electrode, the
first gate electrode having an end portion projecting
from the first active area;

a second active area arranged adjacent to the
first active area;

10 a second conductive type of second MOS transistor
which is formed in the second active area and in which
a gate is configured from the first gate electrode;

a second conductive type of third MOS transistor
which is formed in the second active area and in which
15 a gate is configured from a second gate electrode;

a third active area formed apart from the first
active area;

a first conductive type of fourth MOS transistor
which is formed in the third active area and in which
20 a gate is configured from a third gate electrode, the
third gate electrode having an end portion projecting
from the third active area;

a fourth active area arranged adjacent to the
third active area;

25 a second conductive type of fifth MOS transistor
which is formed in the fourth active area and in which
a gate is configured from the third gate electrode; and

a second conductive type of sixth MOS transistor which is formed in the fourth active area and in which a gate is configured from a fourth gate electrode,

wherein the end portion of the first gate
5 electrode projecting from the first active area is obliquely arranged relative to a gate width direction of the first MOS transistor, and the end portion of the third gate electrode projecting from the third active area is obliquely arranged relative to a gate width
10 direction of the fourth MOS transistor.

2. A semiconductor device according to claim 1, wherein the first gate electrode has an end portion projecting from the second active area, the third gate electrode has an end portion projecting from the fourth
15 active area, the end portion of the first gate electrode projecting from the second active area is obliquely arranged relative to a gate width direction of the second MOS transistor, and the end portion of the third gate electrode projecting from the fourth
20 active area is obliquely arranged relative to a gate width direction of the fifth MOS transistor.

3. A semiconductor device according to claim 2, wherein the second gate electrode has an end portion projecting from the second active area, the fourth gate
25 electrode has an end portion projecting from the fourth active area, the end portion of the second gate electrode projecting from the second active area is

obliquely arranged relative to a gate width direction of the third MOS transistor, and the end portion of the fourth gate electrode projecting from the fourth active area is obliquely arranged relative to a gate width direction of the sixth MOS transistor.

4. A semiconductor device according to claim 1, wherein the first, second, and third MOS transistors are arranged in point symmetry on the basis of a central point between the first MOS transistor and the fourth MOS transistor relative to the fourth, fifth, and sixth MOS transistors.

5. A semiconductor device according to claim 4, wherein the first to sixth transistors configure a rectangular unit cell and other unit cells are arranged in line symmetry on the basis of each side of the unit cell outside the unit cell.

6. A semiconductor device according to claim 5, wherein the end portion of the first gate electrode projecting from the first active area and the end portion of the third gate electrode projecting from the third active area are obliquely arranged relative to a long side direction of the unit cell.

7. A semiconductor device according to claim 1, further comprising;

a first shared contact which is commonly connected to the end portion of the first gate electrode projecting from the first active area and the third

active area, and

a second shared contact which is commonly
connected to the end portion of the third gate
electrode projecting from the third active area and the
first active area.

8. A semiconductor device according to claim 7,
wherein a major axis of the first shared contact and
the end portion of the first gate electrode projecting
from the first active area are arranged in the same
direction, and

a major axis of the second shared contact and the
end portion of the third gate electrode projecting from
the third active area are arranged in the same
direction.

9. A semiconductor device according to claim 1,
wherein the first to fourth active areas are formed on
an insulating film.

10. A semiconductor device comprising:

a first active area formed in an isolation area;

a first conductive type of first MOS transistor
which is formed in the first active area and in which
a gate is configured from a first gate electrode, the
first gate electrode having an end portion which
projects from the first active area and resides in the
isolation area;

a second active area arranged adjacent to the
first active area in the isolation area;

a second conductive type of second MOS transistor which is formed in the second active area and in which a gate is configured from the first gate electrode;

5 a second conductive type of third MOS transistor which is formed in the second active area and in which a gate is configured from a second gate electrode;

a third active area formed apart from the first active area in the isolation area;

10 a first conductive type of fourth MOS transistor which is formed in the third active area and in which a gate is configured from a third gate electrode, the third gate electrode having an end portion which projects from the third active area and resides in the isolation area;

15 a fourth active area which is arranged adjacent to the third active area in the isolation area;

a second conductive type of fifth MOS transistor which is formed in the fourth active area and in which a gate is configured from the third gate electrode; and

20 a second conductive type of sixth MOS transistor which is formed in the fourth active area and in which a gate is configured from a fourth gate electrode,

wherein the end portion of the first gate electrode present in the isolation area is obliquely
25 arranged relative to an extended direction of the first gate electrode arranged on the first active area, and the end portion of the third gate electrode present in

the isolation area is obliquely arranged relative to an extended direction of the third gate electrode arranged on the third active area.

11. A semiconductor device according to claim 10,
5 wherein the first gate electrode has an end portion which projects from the second active area and resides in the isolation area, the third gate electrode has an end portion which projects from the fourth active area and resides in the isolation area, the end portion
10 of the first gate electrode projecting from the second active area is obliquely arranged relative to a gate width direction of the second MOS transistor, and the end portion of the third gate electrode projecting from the fourth active area is obliquely arranged relative
15 to a gate width direction of the fifth MOS transistor.

12. A semiconductor device according to claim 11,
wherein the second gate electrode has an end portion which projects from the second active area and resides in the isolation area, the fourth gate electrode has
20 an end portion which projects from the fourth active area and resides in the isolation area, the end portion of the second gate electrode projecting from the second active area is obliquely arranged relative to a gate width direction of the third MOS transistor, and the
25 end portion of the fourth gate electrode projecting from the fourth active area is obliquely arranged relative to a gate width direction of the sixth MOS

transistor.

13. A semiconductor device according to claim 10,
wherein the first, second, and third MOS transistors
are arranged in point symmetry on the basis of
5 a central point between the first MOS transistor and
the fourth MOS transistor relative to the fourth,
fifth, and sixth MOS transistors.

14. A semiconductor device according to claim 13,
wherein the first to sixth MOS transistors configure
10 a rectangular unit cell and other unit cells are
arranged in line symmetry on the basis of each side of
the unit cell outside the unit cell.

15. A semiconductor device according to claim 14,
wherein the end portion of the first gate electrode
15 projecting from the first active area and the end
portion of the third gate electrode projecting from
the third active area are obliquely arranged relative
to a long side direction of the unit cell.

16. A semiconductor device according to claim 10,
20 further comprising;

a first shared contact which is commonly connected
to the end portion of the first gate electrode
projecting from the first active area and the third
active area, and

25 a second shared contact which is commonly
connected to the end portion of the third gate
electrode projecting from the third active area and

the first active area.

17. A semiconductor device according to claim 16,
wherein a major axis of the first shared contact and
the end portion of the first gate electrode projecting
5 from the first active area are arranged in the same
direction, and

a major axis of the second shared contact and the
end portion of the third gate electrode projecting from
the third active area are arranged in the same
10 direction.

18. A semiconductor device according to claim 10,
wherein the first to fourth active areas are formed on
an insulating film.

19. A semiconductor device comprising:
15 a first conductive type of first MOS transistor
which is formed in a first active area and in which
a gate is configured from a first gate electrode, the
first active area including a diffusion layer which is
connected to a contact supplied with power supply
20 voltage and a diffusion layer on a node side of the
first MOS transistor, which is arranged on an opposite
side of the diffusion layer;

a second active area arranged adjacent to the
first active area;

25 a second conductive type of second MOS transistor
which is formed in the second active area and in which
a gate is configured from the first gate electrode;

a second conductive type of third MOS transistor which is formed in the second active area and in which a gate is configured from a second gate electrode;

5 a third active area formed apart from the first active area;

a first conductive type of fourth MOS transistor which is formed in the third active area and in which a gate is configured from a third gate electrode, the third active area including a diffusion layer which is
10 connected to a contact supplied with power supply voltage and a diffusion layer on a node side of the first MOS transistor, which is arranged on an opposite side of the diffusion layer;

15 a fourth active area arranged adjacent to the third active area;

a second conductive type of fifth MOS transistor which is formed in the fourth active area and in which a gate is configured from the third gate electrode; and

20 a second conductive type of sixth MOS transistor which is formed in the fourth active area and in which a gate is configured from a fourth gate electrode,

wherein the first to sixth MOS transistors configure a rectangular unit cell, a longitudinal direction of the diffusion layer on the node side of
25 the first MOS transistor and a long side direction of the unit cell are arranged at an angle of 20 to 30 degrees from each other, and

a longitudinal direction of the diffusion layer on the node side of the fourth MOS transistor and the long side direction of the unit cell are arranged at an angle of 20 to 30 degrees from each other.

5 20. A semiconductor device according to claim 19, wherein the first, second, and third MOS transistors are arranged in point symmetry on the basis of a central point between the first MOS transistor and the fourth MOS transistor relative to the fourth, fifth,
10 and sixth MOS transistors.

 21. A semiconductor device according to claim 20, wherein other unit cells are arranged in line symmetry on the basis of each side of the unit cell outside the unit cell which consists of the first to sixth MOS
15 transistor.

 22. A semiconductor device according to claim 19, wherein the first gate electrode has an end portion projecting from the first active area, the third gate electrode has an end portion projecting from the third
20 active, the end portion of the first gate electrode projecting from the first active area and the end portion of the third gate electrode projecting from the third active area are obliquely arranged relative to a long side direction of the unit cell.

25 23. A semiconductor device according to claim 19, wherein the first gate electrode has an end portion projecting from the first active area, and the third

gate electrode has an end portion projecting from the third active, the semiconductor device further comprising:

5 a first shared contact which is commonly connected to the end portion of the first gate electrode projecting from the first active area and the third active area; and

10 a second shared contact which is commonly connected to the end portion of the third gate electrode projecting from the third active area and the first active area.

15 24. A semiconductor device according to claim 23, wherein a major axis of the first shared contact and the end portion of the first gate electrode projecting from the first active area are arranged in the same direction, and

20 a major axis of the second shared contact and the end portion of the third gate electrode projecting from the third active area are arranged in the same direction.

25 25. A semiconductor device according to claim 19, wherein a gate width direction of the first MOS transistor and a gate width direction of the fourth MOS transistor are arranged at an angle of 20 to 30 degrees relative to the long side of the rectangular unit cell which is configured from the first to sixth MOS transistors.

26. A semiconductor device according to claim 19, wherein the first to fourth active areas are formed on an insulating film.